



AT A GLANCE

Diabetes

Disabling, Deadly, and on the Rise

2006

What is the lifetime risk for diabetes for people born in the United States in 2000?

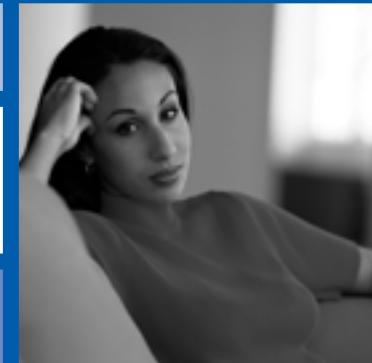


1 of 3 Americans



1 of 2 Hispanic females

2 of 5 African Americans and Hispanics



Control diabetes. For life.

"New evidence shows that 1 in 3 Americans born in 2000 will develop diabetes sometime during their lifetime. Together we can and must do more to prevent and control this growing epidemic of diabetes."

*Julie Louise Gerberding, MD, MPH
Director, Centers for Disease Control and Prevention*

Diabetes: A Leading Cause of Death in America

In the last 15 years, the number of people in the United States with diagnosed diabetes has more than doubled, reaching 14.6 million in 2005. Although more than 20.8 million Americans have diabetes, 6.2 million do not know they have the disease.

People with diabetes have a shortage of insulin or a decreased ability to use insulin, a hormone that allows glucose (sugar) to enter cells and be converted to energy. When diabetes is not controlled, glucose and fats remain in the blood and, over time, damage vital organs. Diabetes can cause heart disease, stroke, blindness, kidney failure, pregnancy complications, lower-extremity amputations, and deaths related to flu and pneumonia. Heart disease is the leading cause of diabetes-related deaths, and death rates are about 2–4 times higher for adults with diabetes than for those without the disease. There are two main types of diabetes. Type 1 most often appears during childhood or adolescence. Type 2 diabetes, which is linked to obesity and physical inactivity, accounts for 90%–95% of diabetes cases and most often appears in people older than 40. However, it is now being found in younger people and is even being diagnosed among children and teens.

Diabetes Is Preventable and Controllable

The increasing burden of diabetes and its complications is alarming. However, much of this burden could be prevented with early detection, improved delivery of care, and better education on diabetes self-management.

- Studies in the United States and abroad have found that better blood sugar control reduces the risk for eye disease, kidney disease, and nerve disease by 40% in people with type 1 or type 2 diabetes.
- Blood pressure control reduces the risk for heart disease and stroke among people with diabetes by 33%–50%. It also reduces the risk for eye, kidney, and nerve diseases by about 33%. Detecting and treating early diabetic kidney disease by lowering blood pressure can reduce the decline in kidney function by 30%–70%.
- Improved control of blood cholesterol levels can reduce cardiovascular complications by 20%–50%.
- Detecting and treating diabetic eye disease with laser therapy can reduce the risk for loss of eyesight by about 50%–60%. Comprehensive foot care programs can reduce amputation rates by 45%–85%.

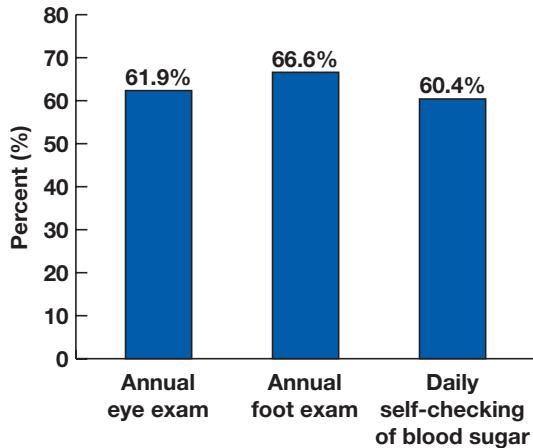
Diabetes has its greatest effects on older adults, women, and certain racial and ethnic groups. One in five adults over age 65 has diabetes. African American, Hispanic, American Indian, and Alaska Native adults are twice as likely as white adults to have diabetes.

In addition to the millions of Americans with diabetes, an estimated 41 million U.S. adults aged 40–74 years have prediabetes—that is, their blood sugar level is elevated but is not high enough to be classified as diabetes. People with prediabetes are at high risk for developing diabetes.

Cost of Diabetes in the United States, 2002

- Total (direct and indirect): \$132 billion.
- Direct medical costs: \$92 billion.
- Indirect costs (related to disability, work loss, premature death): \$40 billion.
- Average annual health care costs for a person **with** diabetes: \$13,243.
- Average annual health care costs for a person **without** diabetes: \$2,560.

Percentage of People with Diabetes Receiving Preventive Care, 2004



Each year, 12,000–24,000 people with diabetes become blind. In 2002, 44,400 people with diabetes developed kidney failure, and about 82,000 had leg, foot, or toe amputations. Preventive care such as routine eye and foot examinations, self-monitoring of blood sugar, and blood sugar control could reduce these numbers. Source: <http://www.cdc.gov/diabetes/pubs/estimates05.htm#complications>.

CDC Provides National Leadership and Builds Partnerships

CDC is committed to ensuring that all people, especially those at greater risk for health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life. With new health protection goals that support healthy people in healthy places across all life stages, CDC is setting the agenda to enable people to enjoy a healthy life by delaying death and the onset of illness and disability by accelerating improvements in public health.

CDC also provides leadership and funding to diabetes prevention and control programs nationwide. In addition, CDC works with partners to provide data for public health decisions, inform the public about diabetes, and ensure good care and education for people with diabetes. In 2006, CDC received about \$63 million for the diabetes program.

Promoting Effective State Programs

In 2005, CDC provided funding for capacity building to 22 states, 8 U.S. territories, and the District of Columbia for diabetes prevention and control programs. CDC also provided funding for basic implementation to 28 state programs. CDC will continue to increase the number of programs receiving funding for basic implementation.

In addition, CDC works with its partners to develop national public health performance standards for diabetes care. The CDC National Diabetes Program has adopted the concept of conducting assessments based on the 10 essential public health services (<http://www.cdc.gov/diabetes>). Results of the assessments will help to identify areas of strength and areas for improvement needed to develop the best public health programs for diabetes prevention and control.

Monitoring the Burden and Translating Science

Timely data and public health research are essential for developing a better understanding of how diabetes affects different population groups and how quality of care can be improved. CDC analyzes data from several national sources, including the Behavioral Risk Factor Surveillance System, and explores ways to collect better diabetes data on groups most at risk.

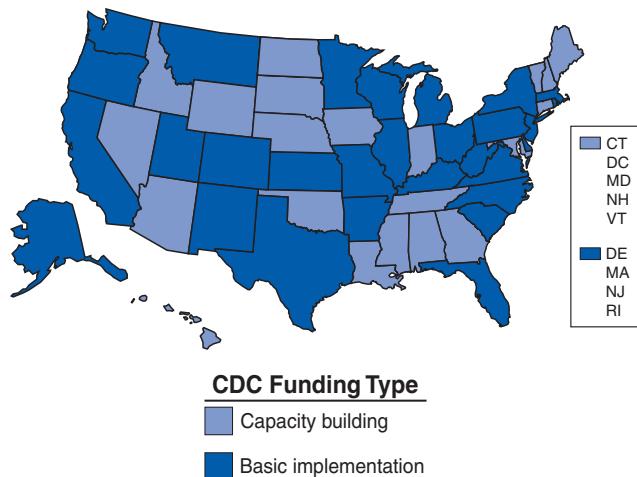
To translate scientific data into higher quality care, CDC works with many research partners, managed care organizations, and community health centers to assess how accepted standards of diabetes care are applied in clinical care settings. CDC and its partners also explore population-based quality of care—examining disparities in diabetes care and developing strategies to improve existing practices.

Providing Education and Sharing Expertise

The National Diabetes Education Program (NDEP) is sponsored by CDC and the National Institutes of Health (NIH). It comprises a network of more than 200 public and private partners who work to increase knowledge about diabetes and its control among health care providers and people with or at risk for diabetes. The goals are to help people with diabetes better manage the disease and to promote policies that improve quality of care and access to care. NDEP partners, including six national minority groups, also develop community interventions and tools to improve diabetes care and prevention, especially for communities with a high burden of diabetes.

NDEP products are available on the Internet (<http://www.ndep.nih.gov>) in English, Spanish, and 15 Asian and Pacific Islander languages. NDEP also has three Web sites that target specific audiences: <http://www.diabetesatwork.org> (for business and managed care companies), <http://www.betterdiabetescare.nih.gov> (for health care providers), and <http://www.cdc.gov/diabetes/ndep> (for anyone interested in more information). CDC also develops other resources for health professionals, people with diabetes, and communities.

CDC Funding for Diabetes Control Programs, Fiscal Year 2005*



* CDC also provides funds for capacity building to the following U.S. territories: American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Palau, Puerto Rico, and U.S. Virgin Islands.
Source: <http://www.cdc.gov/diabetes/states/index.htm>.

Supporting Prevention Research

Research suggests that the progression from prediabetes to diabetes can be prevented or delayed. In 2001, results from two landmark clinical trials, the Finnish Diabetes Prevention Study and the U.S. Diabetes Prevention Program (DPP), showed that sustained lifestyle changes that included modest weight loss and physical activity substantially reduced progression to diabetes among adults who were at very high risk.

Results from the DPP were so compelling that the trial was ended a year early. The lifestyle intervention worked equally well for men and women and all racial/ethnic groups, and it was most effective among people aged 60 or older. A healthy diet and modest physical activity can help people cut their risk for type 2 diabetes.

Targeting Populations at Risk

- **Primary prevention for people most at risk.** CDC has initiated primary prevention pilot programs at the state level. CDC is developing methods to identify people at high risk for diabetes, policies to help these people reduce their risk, and public health programs that will slow the diabetes epidemic.
- **Native Diabetes Wellness Program (formerly the National Diabetes Prevention Center).** In response to the diabetes epidemic among American Indians and Alaska Natives, CDC is working with these communities to develop culturally relevant and scientifically sound interventions to prevent complications from diabetes.
- **National Agenda for Public Health Action: The National Public Health Initiative on Diabetes and Women's Health.** This publication offers recommendations to help professionals, women and their families, health care systems, work sites, communities, and schools address the burden of diabetes among women. CDC is working with numerous partners to carry out the plan.
- **SEARCH for Diabetes in Youth.** Rising rates of diabetes among young people are a growing public health concern. In 2000, CDC and NIH funded phase 1 of this 5-year, multicenter study to examine the status of diabetes among U.S. children and adolescents. In 2005, CDC and NIH renewed funding for phase 2 of this study.

State Program In Action: Washington

The state of Washington is successfully responding to the need for an improved health care delivery system. According to the Institute of Medicine, the current U.S. system cannot do the job, and changing the system *will* work. In particular, we need better ways to treat chronic conditions such as diabetes, which affect nearly half of Americans and account for most of the country's health care costs. The Washington State Collaboratives are a proven strategy for changing the health care delivery system to better prevent and manage chronic conditions. These collaboratives bring together primary care providers, patients with diabetes, and health insurance plans in an evidence-based intervention designed to improve diabetes care. More than 85 state groups have participated in one or more of the four collaboratives held since 2000.

Results include improved care, healthier patients, and increased satisfaction among providers. The Washington Diabetes Prevention and Control Program (DPCP) reported that 34 clinical teams participated during 2004–2005, working with about 4,300 patients. The DPCP reported the following improvements in major health measures for diabetes control:

- 88% of the teams reported improvements in patients' blood sugar control (i.e., A1C levels <7).
- 80% of the teams reported reductions in patients' low-density cholesterol (i.e., levels <100 mg/dL).
- 72% of the teams reported reductions in patients' blood pressure (i.e., levels <130/80 mm Hg).

Future Directions

CDC will continue to work with its partners to strengthen diabetes surveillance, prevention research, interventions, and communications. CDC also plans to increase the number of diabetes prevention and control programs that receive basic implementation funding to put their plans into action, expand research and surveillance activities to address the unique needs of women and children with diabetes, develop and carry out a national public health strategy to address type 2 diabetes among children, and expand the activities of the National Diabetes Education Program.

For more information or additional copies of this document, please contact
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Telephone: 800-CDC-INFO (232-4636) • TTY: 888-232-6348
E-mail: cdcinfo@cdc.gov • Web: <http://www.cdc.gov/diabetes>